UF UNIVERSITY of FLORIDA
IFAS Extension

ENH 63

Let Your Lawn Tell You When To Water [1]

L.E. Trenholm and J. Bryan Unruh[2]

Many homeowners irrigate their lawns incorrectly. Overwatering is the most common mistake; it can damage or even kill the lawn. Overwatering leads to a shallow root system; increases a lawn's vulnerability to weeds, insects, and diseases; reduces drought tolerance; increases thatch; encourages excessive growth; and reduces tolerance for environmental stress.

Letting your lawn "tell you when to water" means turning your irrigation system to "off" and operating it only when your lawn shows signs of drought stress.

How much water does grass need?

Water requirements vary based on grass species, time of year, geographic location, soil conditions, amount of shade, and overall maintenance of a lawn. Because these varied factors each affect a lawn, rigid guidelines for your lawn's irrigation frequency may not be accurate. Consult the Your Florida Lawn website, (http://hort.ifas.ufl.edu/yourfloridalawn/), the Florida Automated Weather Network (http://fawn.ifas.ufl.edu), or your county Extension office (http://solutionsforyourlife.ufl.edu/map/) for recommendations on irrigation frequencies for your area.

In many parts of Florida, irrigation frequency is regulated by Water Management Districts. You may not lawfully irrigate more frequently than Water Management District regulations for your area allow. (For more information, see the following website: http://www.dep.state.fl.us/secretary/watman/.) Be aware, as well, that you do not necessarily need to irrigate as frequently as these regulations allow. Instead, let your lawn tell you when to water.

Figure 1. Zoysiagrass lawn under drought stress.
Credits: Dr. J. Bryan Unruth, UF/IFAS

How will I know when to water?

Look for the following signs and consider watering when you see at least one of them:

1. Folding leaf blades. Drought-stressed lawns will curl up their leaf blades lengthwise in an attempt to minimize leaf area (Figure 1). Wilting is best seen on the older leaves

1. This document is ENH 63, one of a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date March 2000. Revised November 2008. Reviewed February 2012. Visit the EDIS website at http://edis.ifas.ufl.edu.

2. L.E. Trenholm, associate professor, Environmental Horticulture Department, Gainesville, FL 32611, and J. Bryan Unruh, professor, West Florida Research and Education Center, Milton, FL, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida.

of the grass plant, as the younger leaves are not fully developed and may appear wilted even when they are not.

2. Blue-gray color. Drought-stressed lawns turn from green to bluish-gray.

3. Footprints remaining visible. When footprints or tire tracks remain visible on your lawn long after being made, your lawn is experiencing drought stress.

How much wilt is O.K.?

The answer to this question is "it depends." Warm-season turfgrasses can easily survive extended periods of drought by entering dormancy. It is okay to allow your grass to enter dormancy, provided you are prepared to see some wilt signs and browning of leaf blades.

If a period of limited or no rainfall or irrigation is prolonged, you can expect your lawn to thin out and possibly experience increased weed pressure. If your desire is to maintain a uniformly green lawn during drought, you will need to apply supplemental irrigation. However, the supplemental irrigation must be carefully monitored. Unless rain is forecast in the next 24 hours, lawns should be irrigated when 30 - 50 percent of the lawn shows signs of wilt. How long it will take your lawn to exhibit wilt to this extent will depend upon the climate of your area and the soil conditions in your yard. Caution should be exercised when applying weed-control products, as they may harm an already-stressed turf.

Train your lawn's roots to grow deep.

One way to help your lawn endure drought is to encourage deeper rooting (Figure 2). Irrigate only when the grass begins to show one of the three signs of lawn thirst listed above. When you do water, apply the proper amount of water. These practices will increase rooting depth and overall turf-stress tolerance.

Another way to encourage deeper rooting is proper mowing. Mow at the highest recommended height for your grass type, and your grass' roots will grow deeper. When you mow too low, the grass puts energy into regrowing shoots, rather than establishing deeper roots.

Please refer to Your Florida Lawn for more information on best mowing practices.

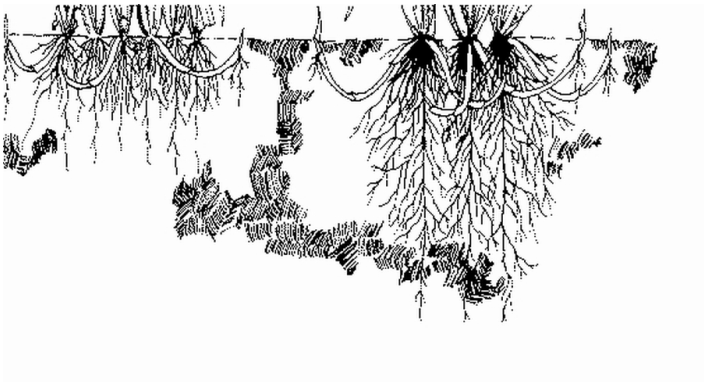

Figure 2. To encourage deep rooting, irrigate your lawn deeply and infrequently and mow your lawn at the highest recommended height for the grass type.

How much water is the proper amount?

Your objective when irrigating is to get the maximum amount of water to the root zone without wasting water. To achieve this objective in most Florida soils, you will need to apply somewhere between ½ inch and ¾ inch of water per irrigation event.

Sandy soils will generally get wet down to 12 inches for each inch of water you apply. In heavier soils, such as are common in North Florida, you might only need to apply ½ inch of water in a single irrigation event. In some areas in the southeastern part of Florida -- or wherever hard limestone is less than 12 inches below the soil surface, you may also need less water since the roots will not be able to grow past the barrier anyway.

When watering restrictions are in effect, homeowners are often tempted to apply more water to compensate for the reduction in frequency of irrigation. However, applying more water than the grass can absorb only wastes water. Additionally, runoff -- excess water that the grass' roots cannot absorb -- creates potential pollution hazards, as fertilizer and pesticide chemicals can be washed into groundwater or surface water. A lawn that is too wet is also at greater risk for disease and weed problems.

How long do I run my irrigation system to apply the correct amount of water?

To determine how long to run your sprinkler system to apply the correct amount of water, set out small, straight-sided cans (such as coffee, tuna fish, or cat food cans) randomly within an irrigation zone and see how long it

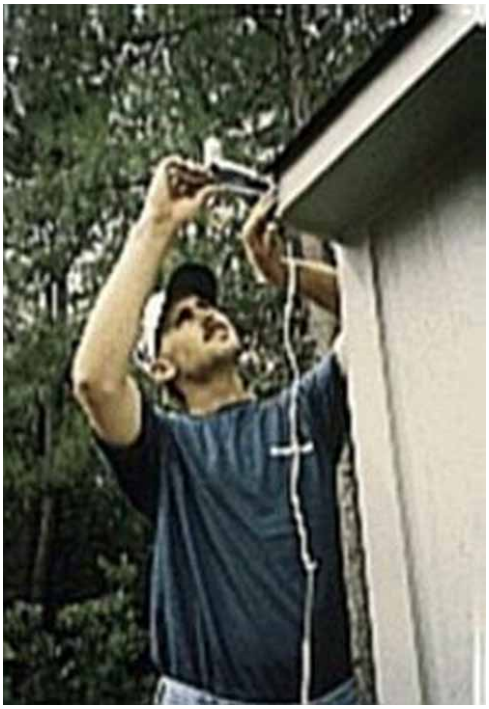

Figure 3. Check to be sure rain sensors are functioning well.

takes to fill them to the desired depth of ½ - ¾ inch. Repeat this process for each irrigation zone in your lawn. Be sure to check your irrigation system for uniform coverage; all the cans should have approximately the same amount of water.

Your irrigation system consists of multiple "zones," each of which covers a specific area of your yard. Be sure your irrigation system is zoned separately for the lawn and ornamental plants so that each zone will apply different amounts of water at different frequencies. A zone that covers your lawn should not also cover landscape plants since irrigation requirements differ between species.

Additionally, rain sensors, mandated by state law on all new irrigation systems since 1991, should always be functional and in place (Figure 3). These sensors will automatically skip an irrigation event if it has rained.

For more information on irrigation practices and how to train your lawn to become drought tolerant, refer to Your Florida Lawn, http://hort.ifas.ufl.edu/yourfloridalawn/.